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Announcement

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THE EXPECTANT MOTHER

CARE OF HER HEALTH

BY

ROBERT L. DENORMANDIE M.D., F.A.C.S.

Instructor in Obstetrics, Harvard Medical School

THE NATIONAL HEALTH SERIES

EDITED BY

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INTRODUCTION

THE ENTIRE program of what we may designate as the new public-health movement is focused about the child. The hopes of mankind for a future race, more virile, less susceptible to infection, better developed, and better balanced to meet both the pleasures and strains of life, depend in great measure upon the circumstances of the earliest formative years of childhood. But even to a greater degree, the future welfare of our nation depends upon the circumstances that surround the child before birthhis inheritance of physical and mental characteristics, his opportunities for normal development and for normal nutrition while yet in the mother's womb. This is simply the equivalent of saying that much in these directions depends upon the knowledge of the mother as to the proper details of her personal hygiene during the pregnant state. She should know what to do, what to eat, when and how much to sleep, when to exercise, when to rest. She must know what things she should at once call to the physician's attention. Above all, she needs to be reassured; she needs to understand what phenomena of pregnancy are normal and what are abnormal. She needs to be delivered from the harassing, terrifying, false beliefs and superstitions that are constantly thrust before her by ill-advised, thoughtless relations and friends of her own sex.

In this one of the series of the National Health Council's little booklets on health, Dr. DeNormandie does just these things—in clear, simple, understandable language, compactly and interestingly writ-

INTRODUCTION

ten. He is preeminently qualified to do so. For years a prominent leader in obstetrics, a teacher as well as a practitioner, deeply interested in the broader aspects of obstetrics in its relation to public health, hospital service, district nursing, and the practise of medicine, he has studied the problems of pregnancy from every angle. The essential details that his long experience has taught him to be of greatest value to the expectant mother are all to be found within the brief confines of this little book.

EUGENE R. KELLEY, M. D.
Commissioner of Public Health
of

The Commonwealth of Massachusetts.

Boston, March, 1924.

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THE EXPECTANT MOTHER

CHAPTER I

DIAGNOSIS OF PREGNANCY

THE DIAGNOSIS of pregnancy usually is a comparatively easy matter, but in a few cases it is, in the early weeks, one of the most difficult diagnoses to make; therefore in some cases the patient is frankly told the difficulty and asked to return for further examination in a month's time. The first sign that makes a woman suspect that she may have become pregnant is the non-appearance of her menstruation. In a woman of the childbearing age who previously has been regular in her monthly periods, this cessation of the menstruation is a most important and suggestive sign. Coincident with this stopping of the menstruation, the breasts become enlarged and firm, tender, with prickling sensations, or as many women describe it. "pins and needles sticking into them." In those women who have these sensations at a menstrual period this symptom, of course, carries not so much weight as in those women who have never before experienced it.

Shortly after a menstruation has been skipped, morning nausea, a feeling of distress or active vomiting, may occur. It occurs so frequently that women have come to look upon it as one of the signs of pregnancy. It is true, however, that many women do not have this nausea, and they do not have to have it in order to be pregnant, as so many women

think they must. A certain, tho small, proportion of cases have no nausea in the morning and feel unusually well, but do have a marked nausea in the

late afternoon and early evening.

Usually within the first four or five weeks the woman notices that she passes her water more frequently and often has to get up in the night to void. These four signs, the non-appearance of menstruation, the changes in the breasts, the morning nausea, the changes in the passing of the urine, are regarded as the presumptive signs of pregnancy. One or all of these signs may be present the first time the patient presents herself to her doctor for a diagnosis of pregnancy. Usually the patient herself has made the diagnosis, but the definite diagnosis of pregnancy can be made only by a vaginal examination.

The importance of this first vaginal examination is underestimated by almost all patients. Every woman who suspects that she has become pregnant should, as soon as she has skipped her first period, go to a physician and have him make a pelvic examination in order to establish definitely, if possible, that she is pregnant. This examination not only establishes that she is or is not pregnant in most cases, but it determines whether the pelvic organs are in normal condition. The uterus, the organ in which pregnancy develops, is a movable organ, and in many women it takes a position backwards in the pelvis which, if not rectified early in pregnancy, may cause serious complications in the first few months. It is by this examination that many early miscarriages may be avoided; abnormal conditions in the pelvis are discovered, and treatment, if necessary, can at once be carried out. Few women who think themselves pregnant present themselves to their physician or to the clinic early

enough. They assume that their nausea can not be helped; they assume that nothing need be done for at least the first four or five months of their pregnancy. This is a wrong attitude to take, for careful pelvic examinations will do much to rule out many of the complications that come in pregnancy, and will lower the number of early miscarriages which we know are of frequent occurrence. Early supervision will tend to keep patients in better physical condition. The diagnosis of pregnancy in this early stage is not absolute, ever; but the probability is so great that it is fair to tell a patient that she is pregnant and then proceed to tell her the various points that she should know in regard to the hygiene of pregnancy.

The positive signs of pregnancy, feeling the baby move and hearing the heart beat, can not always be found until the fifth month, and sometimes it is even later before these signs are absolutely certain.

CHAPTER II

DURATION OF PREGNANCY

THE DURATION of pregnancy is ten menstrual periods of twenty-eight days each. That is the probable duration of pregnancy, but if we know the date of conception there is less uncertainty as to the exact date of delivery. The average length of pregnancy, where the beginning can be dated from a single intercourse, varies from 273 to 275 days. The most satisfactory way to reckon the approximate date of delivery is to take the first day of the last menstrual period, count back on the calendar three months, and add to this date seven to ten days. The date obtained in this way gives only the approximate date that delivery may be expected. At no time should the patient be given to understand that delivery will take place on that date; for altho it sometimes does happen that labor starts on the day that is reckoned, many more times the estimated date is wrong, and the patient may be delivered a week or so early or late. The point to be remembered is that the date chosen is only approximate, that everything should be ready for delivery at least three weeks before that date, but under no circumstances should the patient be alarmed if she goes over a few days. Patients must be made to realize that pregnancy is reckoned as beginning close to the last menstrual period. It is perfectly possible, however, that pregnancy did not begin until just before the next menstruation, and that menstruation was either stopped entirely or materially altered in its characteristics; that is, it was either a day or so short, or if a patient was in the habit of flowing profusely it was a much less profuse menstruation than usual. If a patient can definitely say that there was no opportunity for conception to have occurred until a certain date, then the beginning of pregnancy is reckoned from that known date of intercourse. In all cases where, because of various circumstances, it is known that the pregnancy can be reckoned from one date, the patient should frankly tell her physician what that date is, and then there will be no annoying expec-

tancy during the last weeks of pregnancy.

The fact that patients often become pregnant two to three weeks after the last menstruation explains in the great majority of cases the "overtime" or "late cases." Many unnecessary operations are done and much mental distress is caused by forgetting this simple but not too well-known fact. Undoubtedly there are a few well-authenticated cases of a pregnancy going over the allotted number of days-the so-called "post-mature infants." In these cases the greatest importance is to be placed on the careful supervision of the patient at the very end of pregnancy to determine whether or not the child that is in the uterus is becoming too large. When such cases occur, careful supervision and good judgment will determine whether any operative procedure is necessary, but without careful supervision serious results occur. These cases are on the whole rare, and most of them are explained, as I have suggested, by the fact that the patient became pregnant shortly before the expected date of her next period, rather than shortly after the last period which occurred.

In contrast to the post-mature child is the premature child, which means that the fetus is expelled from the uterus before its allotted 280 days. The earlier the baby is expelled from the uterus before the 280 days, the less is the chance of that baby surviving. The old saying that an eight-months baby will die while a seven-months baby will live is an entire fallacy, and is based upon the fact that an eight-months baby in many cases looks much like a full term child, and the necessary care, oversight, and careful nursing are not given the eight-months baby, while everybody appreciates how slender a hold on life the seven-months baby has, and therefore treats it with all possible care, surrounding it with every help to support life until it can itself do so readily, and its premature days are past.

CHAPTER III

DETERMINATION OF SEX

MANY mothers, and not a few fathers, are anxious for the physician to try to tell them the sex of the child before it is born, and many ask if there is some way whereby the sex of the child can be settled before a pregnancy is begun. In all probability the sex of the fetus is determined the moment impregnation takes place. How that can be in any way determined beforehand is absolutely unknown. Many theories have been expounded, but up to the present time all have been exploded. The determination of the sex before the child is born is based purely on the rate of the fetal heart as counted by listening to it through the mother's abdomen. At best it is only a guess, and the guess is based on the fact that in a large series of cases, if the fetal heart is slow, about 120 beats to the minute, the majority of these babies will be boys; while if the fetal heart is around 140 beats to the minute, the majority of these babies will be girls.

Do not believe what your talkative friends tell you, that a boy is carried thus and a girl thus, for it is all idle gossip. And do not believe physicians who tell you positively of the sex. A story is told of a physician in regard to this question. He always finds out the sex wanted and then writes down in his book of cases the opposite sex. If the wishedfor sex is obtained, well and good—he is a prophet; if not, he turns to his book and says, "No, it is written here the opposite." Again he is a prophet. But do not believe these stories. There is no way

of predetermining the sex of a child.

CHAPTER IV

HYGIENE OF PREGNANCY

IN THE past few years great improvement has been made in the care of the pregnant woman. The good results of this care have been demonstrated in thousands upon thousands of cases; and it is well established that no woman in the country should go through pregnancy without careful medical supervision throughout its entire duration.

DIET

The chief point for a pregnant patient to remember is that she must have a generous mixed diet, and by a mixed diet we mean that her diet should contain the essential elements that go to make up a well-balanced ration. She should have proteids, fats, carbohydrates, a liberal amount of water, and a satisfactory amount of minerals. In the early weeks of her pregnancy, when nausea is present, she will find that marked relief will be given if she eats six small meals a day rather than the accustomed three. The old saving that a pregnant woman must eat for two has long ago been exploded. We are all apt to eat much more than is necessary in order to keep the human system in good physical condition, and if the pregnant patient adds greatly to her diet, she puts on an unnecessary amount of weight and imposes upon her organs, especially her kidneys. an abnormal burden.

The pregnant patient ought not to eat any one food that she knows will upset her digestion, but she must not listen to the tales of friends, relatives, and neighbors that she must eat this or must not

eat that kind of food. The proteid food puts the greatest strain on the kidneys, and, as we shall see later, in the latter part of pregnancy a lowered amount of proteid diet is advisable in many cases. That is the reason why, in the latter half of pregnancy, patients are advised to have red meat only once a day and not to eat meat, fish, and eggs every

day throughout their pregnancy.

The fats and carbohydrates tend to make the patient very fat, and if this type of food is eaten to excess, marked indigestion at times may be caused and sugar may appear in the urine. It is for this reason that the patient is advised against a markedly increased diet. Fruits, vegetables, the leafy vegetables, add to the water intake and the mineral substances that are needed during a pregnancy. Milk also adds to the mineral matter needed. Salads with dressings can be eaten with impunity, provided the digestion is not upset. Every pregnant woman should drink at least eight glasses of water or liquids in the twenty-four hours. Only one cup of coffee and one cup of tea, if any, should be drunk in a day. All forms of alcohol should be omitted.

EXERCISE

A proper amount of exercise is essential. The safest form of exercise is, without a doubt, walking. How many miles or how long she should walk each day is entirely a problem that she must settle with the help of her physician. Some patients walk two, three, or four miles a day with obvious improvement in their general condition, while a half-mile walk is too much for others. A suggestion for patients is that after a walk, if they come back and lie down for half to three-quarters of an hour and then get up feeling refreshed, they have not walked too much, and a few days later they

can walk a little farther; but if they come back and after the rest get up feeling fatigued, they have walked too far. The more strenuous forms of athletic exercise, such as tennis, golf, horseback riding, or swimming, can be indulged in only with the greatest care, and under certain circumstances (see "Miscarriage," chapter VI) must be given up entirely. Many patients will obtain a considerable amount of exercise around their own house in the many details of housekeeping. But even here, the patient must remember that she must not overdo: she must not lift heavy pieces of furniture, and she must not do a hard day's washing. In many cases, of course, this can not be avoided, but when necessary work must be done, the patient must try to plan the work so that as little as possible is done during the time that would be a menstrual period were she not pregnant. This phrase, "the menstrual period were she not pregnant," must be remembered throughout the entire pregnancy, and the reason for it is that the uterus is more irritable, has a greater tendency to contract, with a possible miscarriage following, at this time than at any other.

Whether we shall allow pregnant patients to work during their pregnancy has to a slight extent been settled for us. In some of the States, pregnant women are allowed to work in the mills up to within four weeks of their expected confinement. This varies in different parts of the country; but our legislative bodies have recognized the fact that the pregnant woman should not work up to the date of confinement. That, however, is a very uncertain date, and the result is that many women work up to the very day they are confined. Until our laws are better framed, this condition will continue to exist. It surely is not right and should not be allowed, but the economic situation in many families

is such that the woman of the family feels that she must work to help eke out the man's meager income. There is no doubt that tremendous strides can be made in this respect in the care of the pregnant woman, but it can not be done unless the public appreciates the danger that comes to the pregnant woman and her unborn child from working at this time, and will safeguard her in every possible way.

FRESH AIR AND RECREATION

Fresh air and recreation are important. If the patient finds that she is unable to get out a part of each day and have the walk that is necessary, she should do the work that she does around the house with her windows open as wide as possible. It is a makeshift at best, but it is better than nothing. As far as recreation is concerned, any of the simpler forms of recreation are not only allowable but essential for the patient's well-being. Many women lead a humdrum existence with practically no form of recreation. With the wide use of the automobile, however, much pleasure can be derived from carefully planned rides. No long rides over rough roads should be allowed. Long touring not infre-quently causes abortions, and if the patient has shown the slightest suggestion of miscarrying, the automobile should be forbidden. Riding in the front seat causes very much less jarring than in the back seat. Driving herself does no harm provided she drives carefully and slowly over good roads at a moderate speed-not over twenty miles an hour. The time may come in the pregnancy, however, when automobile riding becomes very fatiguing, causing backache and other discomforts. When this does occur, it is very much better for the patient to stay out of the automobile entirely. The automobile, carefully used, is without doubt a splendid means of recreation, but carried to extremes it is an abuse that causes many miscarriages. Every individual patient must be told by her own physician what she can do. No two patients are alike.

Long trips in railroad trains undoubtedly do cause a certain number of miscarriages. If it is absolutely necessary that a long trip be taken, it should be broken by a day or two of rest, and the trip should not be taken during the time that would be a menstrual period if the patient were not pregnant. The same may be said of long sea trips. The fundamental thing to be remembered is that when a patient is pregnant she should stay where she can be properly looked after, and not go traveling about the country.

The question of fresh air in the sleeping room is also very important. Every patient should sleep with her windows open. Many women feel the need for fresh air especially marked as they go on in their pregnancy. For this reason many patients feel a sense of oppression when they go to the thea-

ter or into close and crowded halls.

Any mild form of exercise which gives to the patient a sense of well-being and recreation is good for her, and should be encouraged in every possible way, but if the simplest sort of exercise causes fatigue, her routine must be carefully studied and rearranged by her physician.

REST

Every patient should so map out the schedule of her day that she will lie down at least one hour with her clothes off, especially with her corsets off if she is wearing them, in order to have a complete rest. Those who can do this—and many more can do it than think they can, if they plan their work carefully—go through pregnancy in much better condition than if they had no rest. We appreciate that it is a difficult thing for many patients to accomplish this rest. If they can not do it for an hour at a time, they can do it for half an hour morning and afternoon to great advantage. Especially should a working woman who is pregnant be given a period for rest in the morning and again in the afternoon.

SLEEP

Important as are exercise and recreation, sleep is more important, and every patient should sleep at least eight hours every night. Undoubtedly many patients sleep less than this, and for a while go along apparently satisfactorily, only to notice in the course of a few months that they begin to feel very tired and not equal to doing the things that they usually do. When one questions their mode of living, one finds many times that sleep is the one necessary thing that is not being obtained. Many patients have an overwhelming sleepiness in the first two or three months of pregnancy, which annoys them very much. They often think something serious is happening. If by careful physical examination it is found that all the organs are doing their work satisfactorily, it need give no cause for worry, and assurance can be given that it will soon pass off.

BATHS

During pregnancy the skin must be kept in good active condition. This can not be done unless daily baths are taken. Warm tub baths are essential, but hot soaks must be avoided, especially at the time that would be the menstrual period. If the patient has been accustomed to cold baths, there is no reason why she should not continue to have them,

provided she reacts perfectly well following each one. But if on the contrary she is thoroughly chilled without the sense of well-being that comes from cold baths, she must not continue them. Sea-bathing does no harm provided the water is not too cold and there is no high surf. Neither does careful swimming do any harm; but strenuous swimming and diving must be avoided. It must also be added that patients who do not react well from seabathing must not continue it.

Bowels

The care of the bowels is one of the most important points. The patient must have at least one good satisfactory movement a day. If the fact is recalled to her that the baby is growing rapidly inside the uterus with all its products of growth thrown off into her own system, she will at once appreciate the need of getting this material out of her system regularly and completely. This can be done only if she has satisfactory movements each day, combined with a satisfactory urinary output and action of the skin.

The majority of women while they are pregnant need to have some mild cathartic which the physician in charge should advise. A simple cathartic which will give one satisfactory movement a day is the best. Many patients are fearful of getting the habit of taking a cathartic at this time, for they are afraid they will not be able to overcome it when the pregnancy is finished. The habit will not be acquired, if satisfactory care is taken as soon as the baby is born. Even if a habit is acquired, the risk because of insufficient bowel movements is much greater than the discomfort that may arise from the formation of the habit. She may be able to get along satisfactorily without a cathartic the first few months

of the pregnancy, but in the latter half it is always advisable to take some mild cathartic at least twice a week until the pregnancy is finished. Suppositories and enemas are not at all satisfactory, as they empty the lower bowel only and must not be depended upon.

KIDNEYS

The patient should pass at least three pints of urine in the twenty-four hours. Once a month, perhaps, it is important that the amount be known accurately. The twenty-four-hour amount of urine is measured by passing the urine at a given hour in the morning, and then collecting and measur-ing all of the urine that is passed from that hour to and including the same hour the next day. Unless the physician asks especially for the twentyfour-hour amount, it is sufficient to measure the urine up to the time that three pints is passed, noting the time of day. Then, of course, the remainder that is passed shows that the patient is passing well over the necessary amount. At no time should the urine be of high color. It should always be a very light, straw color. If the patient notices that the urine is of high color, she must at once drink large amounts of water in order to keep the secretion of urine up to the minimal amount. Examination of the urine should be done by the physician at least once a month for the first five months, then once in three weeks for the next two months, and the last two months once a week. If at any time abnormal conditions are found, the physician may call for daily specimens of urine.

SKIN

The bowels and the kidneys are the two principal means by which the patient rids herself of the products of the baby's growth and of her own metabolism. The skin is the third means. The invisible perspiration that is going on constantly over the entire body is an important part in the well-being of the patient. The skin of the body must be kept clean and the pores open by daily bathing. It is for that reason that the warm bath already spoken

of is so essential throughout pregnancy.

The discolorations that come in various parts of the body during pregnancy need only be remarked upon and explained. The dark line running from around the navel downwards and upwards is sometimes very marked, especially in brunettes. increased dark areas around the nipples are sometimes very marked. As the patient increases in size and puts on weight, little red lines appear on the abdomen and on the hips, sometimes on the breasts, especially on the under sides of the breasts. These lines are due to the stretching of one of the layers of the skin. They often give a sensation of burning or tingling, but much more frequently they disturb the patient because of the appearance rather than because of any discomfort that they cause. There is nothing that can be done to stop them. Sometimes the tingling can be relieved by gently rubbing in olive oil, but nothing can be done to remove these lines. When the pregnancy is over the redness of these lines fades and they become white. They remain always, but require no treatment. Many patients show dark blotches on the face, especially over the cheeks. Similar blotches may appear on other parts of the body. They are due to an increased amount of pigment which is deposited in the skin. To some patients these blotches are most disturbing. Little can be done to lessen them, but assurance can be given that when the pregnancy is over the spots will fade and the patient will regain her original complexion.

BREASTS

The breasts begin to enlarge very early in pregnancy, especially in the first pregnancy. They become much more firm and many times are very tender. The tenderness and the tingling, of which many patients often speak, come at the time that the patient would menstruate were she not pregnant. The breasts are a very sensitive part of the organism. and patients must be careful to protect them from blows. Just outside the nipples in a ring are a few little glands which enlarge quite a bit during pregnancy—the so-called "glands of Montgomery." Usually it is just noted that they are enlarged, and rarely do they cause any trouble. Occasionally they become infected and may break down. The nipples themselves must be kept clean, but the secretion which sometimes exudes from them and dries in crusts should never be picked off with the finger nails. Whenever any crusts are seen to form, a simple ointment, such as cold cream or lanoline, may be put on them at bed time, and when the morning bath is taken the crusts are softened and come off with the bath. If the nipples have not the normal formation, the physician in charge will say specifically what directions he wants carried out. Do not begin to manipulate the nipples, to wash them or handle them, unless specific orders have been given.

CLOTHING

The fundamentals to be remembered regarding clothing are that the clothes must be warm; they must not be tight around the abdomen, and all that can must hang from the shoulders. At the present day, even with a very small expenditure of money,

attractive maternity gowns may be had. There is no need for pregnant patients to appear unsightly with ill-fitting garments. The underclothing in cold climates should be warm in winter, of the union-suit type. The present-day fashion of wearing very light undergarments is dangerous for the pregnant woman because of the danger of chilling the body and consequent colds. The corsets for the first three or four months may be of the type to which the patient is accustomed, with the understanding that as she increases in weight and size they are to be let out so that at no time do they mark the abdomen. They should never give a sense of pressure. The corsets may be pulled in for sup-port snugly around the hips, but at all times must be loose over the enlarging abdomen. At the fourth or fifth month of the pregnancy the larger or stouter patients especially may want to put on maternity corsets. There is no special maternity corset that is better than others. One patient may like one type of corset and another may always wear a totally different one, both perfectly adequate and giving proper support. The essential thing to remember is that the corset must be comfortable, must give good support in front for the enlarging abdomen. Because a patient is pregnant is no reason that she should put on corsets if she has never worn them before. They are entirely unnecessary and many of the present-day athletic women do perfectly well without wearing any at all, and are comfortable throughout their entire pregnancies.

The shoes should be comfortable, well-fitting,

The shoes should be comfortable, well-fitting, and with low heels. High heels put an extra strain on the patient's back muscles, to say nothing of the danger that they cause the patient from tripping. They ought not to be allowed, and in every

possible way patients should be urged to wear the sensible, well-shaped, low-heeled shoe. Round garters are forbidden, for they cause added pressure on the veins of the legs which are pressed upon greatly by the enlarging uterus.

TEETH

For generations past it has apparently been impressed upon women that as soon as pregnancy begins they should have no dentistry done, and it is for this reason that the old saying arose, "For every child a tooth." Nothing can be further from the truth. As soon as a woman knows that she is pregnant, she should have her teeth examined by a competent dentist, and the necessary work done. If the dentist says that a tooth should be extracted, there is absolutely no reason why it should not be done. No difficult, painful work that can be avoided need be done, but for the dentist to keep the patient's teeth in good condition is exactly as important as it is for the physician to carry her through in good condition. The two are closely related, and some of the ills of pregnancy can be referred directly to had teeth.

Not infrequently when patients are examined after a pregnancy, it is found that many teeth have little cavities and that much attention is necessary. Many of these can be avoided if the patient will brush her teeth regularly after each meal, and, if she has nausea with the belching up of acid-tasting secretions, rinse her mouth with milk of magnesia to counteract the action of the acid on the enamel of the teeth. If she makes a special effort to adopt a satisfactory diet with a good supply of the leafy vegetables, she will help herself greatly to prevent the decaying of her teeth.

HAIR

Many patients complain that a great deal of their hair drops out during pregnancy, but more especially after the pregnancy is completed. We know of no way to stop this absolutely. Help may be given by keeping the scalp in good condition through shampooing and massage, but it will not stop the falling out of the hair in all cases. In most cases the hair soon grows in again.

INTERCOURSE

Undoubtedly the majority of patients have intercourse during their pregnancy. How frequently intercourse is the cause of miscarriages in the early weeks of pregnancy is unknown, but it is certain that it is a potent cause. Many patients are averse to all intercourse during pregnancy. In a small number the desire for intercourse apparently is greater. Every patient should know that there undoubtedly is a risk of miscarriage from intercourse, and it should be strongly advised against at what would be a menstrual period were the patient not pregnant. Intercourse in the middle three months of the pregnancy is of less risk than at other times. It should be forbidden absolutely the last two months, because of danger of infection.

MATERNAL IMPRESSIONS

Of the superstitions that surround pregnancy, none cause quite so much worry and discomfort as the stories that are told in regard to maternal impressions. In a word, the superstition is this: If the patient hears of or sees some very unpleasant sight, she will receive such a shock that her baby will be marked. Gossip-mongers who like to repeat such stories, especially to the woman who is having her first baby, always have some such tale

to relate when a baby exhibits some abnormality. From a physiological point of view and as a matter of fact, there is absolutely no possibility that anything of this type can in any way mark or cause a malformation in a baby. There is absolutely no physical connection between the mother's blood and the blood of the unborn child, nor is there any nervous connection between the mother and the baby. The pregnant woman must not be allowed to think that anything that she may do or say or think can in any way cause her baby to be marked or malformed. The causes of these malformations and the markings, which are really a very rare occurrence, are not known, but we do know that the beginning of such malformations takes place very early in the pregnancy, not infrequently before the patient herself realizes that she is pregnant.

VISITS TO THE PHYSICIAN

Patients, on the whole, do not see their chosen physician as frequently as is advisable. It has already been noted how seldom women present themselves for supervision as soon as they think a pregnancy has begun. The importance of early supervision can not be insisted upon too strongly. Satisfactory care of the pregnant patient will not be given until this is the rule and not the exception. During the first five or six months the patient must see her physician regularly once a month; for the next two months once in three weeks, and for the last two months once in two weeks. This is the minimum that can be regarded as satisfactory. In order to keep in still closer touch with the physician, specimens of the urine are sent to him between the visits. By this plan contact with the physician is kept every two weeks during the first part of the pregnancy, every ten days in the middle, and every

week during the last two months. By this arrangement any changes from the normal are quickly discovered and proper steps may at once be taken

to combat the complications.

If the patient is registered at a clinic for the care of pregnant women, the same plan is carried out—the visits to the clinic are made at the times requested and the nurses make the visits to the patient's home between these clinic visits or the patient comes to the mothers' classes. At each visit the urine is examined, the patient's general health is investigated, and the various medical procedures are carried out. What these are varies in each physician's routine or at each clinic. A blood test, the so-called Wassermann, is the usual procedure in clinic work. It, however, is not done in private work as often as it should be.

Whether the pelvis is measured the first time the patient presents herself to her physician depends upon his routine. Whether it is done at the first visit or at some subsequent visit is immaterial so long as it is done before the seventh month. In clinics patients are usually measured the first time they appear. Measurements show the physician the type of pelvis that the patient has. They will in but a few cases definitely tell the physician whether or not a normal delivery may be anticipated. It is for this reason that as pregnancy advances careful estimation of the size of the baby and its relation to the pelvis must be made from time to time. It is only by this careful oversight that emergency operations can in a great measure be avoided.

In any study of the disasters that come in pregnancy and labor, it is found that the large majority occur in those patients who have had inadequate medical supervision. A careful physician knows before labor begins which cases are likely to prove

abnormal, and he plans beforehand the best method of delivery. He is not forced to do hurried, illadvised operative work on patients who have not been properly studied. It is, therefore, a dual responsibility that is present. The patient must present herself to the physician early for adequate medical supervision, and the physician must give to his patients conscientious care according to the best medical teaching of our time. When such cooperation is present, the untoward disasters that to-day are all too frequent will be greatly diminished. Pregnancy is a normal physiological function, but it is a condition which may, without proper supervision, become very abnormal, calling for the exercise of quick decision and skilled medical attention.

CHAPTER V

DISCOMFORTS AND ILLS OF PREGNANCY

NAUSEA AND VOMITING

THE FIRST of the discomforts to appear following the beginning of pregnancy is the nausea and vomiting. Some patients have nausea the entire time of their pregnancy, with occasional vomiting. Other patients have no nausea to speak of at all. In another group the nausea appears only in the morning, especially on rising; and a small percentage of patients have the nausea in the late afternoon and early evening. At times there is nausea without vomiting, but more commonly the nausea, which may come in waves, is accompanied by vomiting. The majority of patients, having heard that nausea and vomiting are very common in pregnancy, make no effort to help it and all too seldom consult their physician. There is much that can be done if the patient will consult her physician early and keep herself in the best physical condition. The patient who has a slight degree of nausea and vomiting can be helped much by eating some simple food before she gets out of bed, even before she raises her head from the pillow, and then lying still in bed for half to threequarters of an hour. She may then slowly dress and have her breakfast. A short rest after breakfast will help much, and then she can usually begin the day's routine. During the day she should never go longer than three hours without food, and care must be taken not to become overfatigued, for nausea is brought on constantly by overfatigue and worry. If the nausea and vomiting persist and grow steadily worse, a physician must be seen and careful medical and nursing care instituted at once, so that the patient will not go from bad to worse and become a seriously sick woman.

SALIVATION

A few patients are very seriously bothered with a large increase in the amount of saliva that may be secreted during pregnancy. The amount secreted varies very much, but occasionally the patient pours out large amounts constantly. Unfortunately, drugs have but slight effect on this condition. If it is at all marked, the patient should consult her doctor in regard to it. Under no circumstances should she constantly swallow this saliva.

HEARTBURN, GAS. FLATULENCE

Heartburn in its milder forms is a very common accompaniment of pregnancy and is relieved by the simplest remedies, soda-mint tablets or bicarbonate of soda, a saltspoonful in a half glass of water sipped slowly, or a somewhat better way is to take a saltspoonful dry on the tongue and swallow it quickly with a drink of cold water. Heartburn may be caused by indiscretions in diet, and any article of diet that is known to upset the patient when she is not pregnant should not be eaten during her pregnancy. A few patients are relieved by taking a few ounces of cream a half to three-quarters of an hour before the heartburn usually appears. To many, however, this gives no relief. The alkaline waters, taken in large amounts, will help greatly for the time being, but in some cases the heartburn is a manifestation of poisoning that is going on as a result of the pregnancy and will not be cleared

up or improved until this poisoning, the "toxemia of pregnancy," is overcome. In a few patients nothing seems to overcome the distress, and the discomfort is present until the end of pregnancy, but in most cases temporary relief can be obtained by taking large amounts of alkalies. The flatulence which often appears in pregnancy is helped materially by regulation of the diet and the use of some intestinal antiseptic or tonic. In many cases, however, the end of pregnancy alone relieves the distress.

INCREASE IN WEIGHT

During the first weeks of pregnancy many patients, because of nausea and vomiting accompanied by lack of food, lose weight, but after the third month they begin to gain. Unless an accurate record of the patient's weight is kept, she often will put on too much weight. The discomfort that arises from this rapid increase in weight is sometimes very great. The patient also runs a greater risk of developing a toxemia of pregnancy. The average woman gains in her pregnancy from ten to thirty pounds. The short stocky woman is very apt to gain more than the tall thin one. Occasionally a patient will gain fifty or even sixty pounds of weight, but when it is found that the weight is increasing as much as this she should be put on a careful non-fattening diet. When a patient increases in weight rapidly, shortness of breath is very apt to appear, due not only to the increase of her own weight, but to the increase of the pressure of the growing uterus in the abdomen. With this increase in weight she may complain of more or less constant pain in her legs and in her feet. Care-ful examination will reveal the fact that the arches of her feet have given way because of this rapid increase of weight.

VARICOSE VEINS

The enlarging uterus, as the weeks go by, presses more and more on the pelvic veins and in many instances varicose veins of the leg appear. At the beginning only little dilated blood-vessels are seen on the legs, but gradually as the pressure increases these veins stretch until frequently large varicose veins make their appearance. At first the patient simply complains of their appearance, then she may complain of slight burning or tingling sensations in the legs. If the symptoms are slight, no treatment is necessary. Much relief is obtained if the patient lies down for an hour morning and night. In more marked cases great relief can be obtained by having the patient raise her legs to right angles to the body, in order to help the blood flow out of the distended veins. A three-inch flannel bandage cut on the bias may be applied to the legs, starting from the toes, and will give great relief. Adhesive plaster, put three-quarters of the way around the leg, supporting the veins, will also give much relief; but none of these simple aids should be used without the physician's consent and knowledge. In a very marked case of varicosity, an elastic stocking may be necessary.

HEMORRHOIDS

Hemorrhoids (piles) is the name given to varicose veins of the rectum. They are a very annoying and distressing complication of pregnancy. If they appear at all, if any discomfort is present in the rectum or in the anus, the patient's physician must be told of it at once and appropriate measures carried out.

CRAMPS IN THE LEGS

Annoying cramps in the legs, appearing usually after the patient has gone to bed, may appear in any part of the pregnancy, but they usually come in the latter half. Much help can be given to this condition by a gentle massage of the legs before the patient goes to sleep each night. It is not always possible to stop them, but massage will do more good than any other one thing.

RELAXATION OF THE PELVIC JOINTS

As pregnancy advances, the three joints in the pelvis, the two behind and one in front, relax. Very commonly the relaxation of one or the other of the posterior joints gives pain, running down the leg on the side which relaxes. Much help can be given by a proper supporting girdle or corset, but when it is at all marked manipulation may be necessary to put the joint back into its proper relations.

LEUCORRHEA

The discomfort caused by a marked leucorrhea, which is the name given to the whitish discharge which comes from the vagina, is frequently very annoying and distressing. Under no circumstances should douches be taken to overcome this condition unless it is on the specific advice of a physician. If the leucorrhea is accompanied by an inflammation of the vagina or of the urethra, a careful examination must be made to determine the cause. If it is caused by a gonorrheal infection it must be treated efficiently through the pregnancy, in order that it may not cause serious complications at the birth of the child. For the simple leucorrhea that practically all women complain of, especially toward the end of pregnancy, no treatment, except cleanliness,

should be begun unless it is on the specific orders of the physician.

PENDULOUS OR RELAXED ABDOMEN

In some patients, after they have had one or more pregnancies, the abdomen hangs down in each succeeding pregnancy and becomes what is called a pendulous abdomen. This condition is due to the fact that the abdominal muscles are greatly stretched during the pregnancy and do not regain the proper tone. This is one of the reasons that patients are kept in bed after the birth of the child, and that exercises are given them while they are in bed. If the condition is present, the patient will obtain much relief if she wears a well-fitting corset with support from below, or a well-fitting binder. If the condition is at all marked, the physician will specify the exact means of support which will give the patient the greatest relief.

CHAPTER VI

COMPLICATIONS OF PREGNANCY

IT IS obvious that all of the complications of pregnancy can not be discussed here, and it is my wish to speak only of miscarriages, the toxemias of pregnancy, bleeding in pregnancy, and sepsis, commonly called blood-poisoning.

MISCARRIAGE

In the ordinary use of the word among the laity, a miscarriage means the emptying of the uterus before the time that it is possible for the baby to live. From a medical point of view, the division is made more clear. An abortion takes place when the ovum is expelled from the uterus in the first three months; a miscarriage, when it is expelled in the next three months; and a premature birth from the sixth month on until maturity arrives. A still further distinction is made when a patient takes some artificial means to interrupt her pregnancy. This is called a criminal abortion. Any means whatsoever that is taken to interrupt pregnancy from the moment that impregnation takes place is a criminal procedure. Many people think that a pregnancy can be interrupted without criticism up to the period when the woman feels life. That is an idea that should be strongly combated, for the moment that conception takes place a new life is started and any interruption by any method is a criminal procedure. In certain States, when from any cause a pregnancy threatens the patient's life, a "therapeutic abortion" may be performed after consultation has been held with one or more physicians. In many States, however, this procedure is not recognized as a lawful one. It is done, however; but any therapeutic abortion is done openly, following a consultation, and is recognized as allowable.

The occurrence of miscarriages is very common. How frequently early miscarriages take place is a great question, and there can be no accurate statistics on this subject. Many patients fail completely to recognize the fact that they have been pregnant, and the miscarriage takes place so early that it is not much more than an unusual period. It may, however, be the beginning of a long period of invalidism. Most miscarriages occur between the second and third months. The causes of miscarriages are many, and when one realizes the method of growth of the ovum and its attachment to the uterus, the wonder is that more do not occur. It is beyond the province of this little pamphlet to go into the causes of these miscarriages. Any abnormal condition of the uterus, any abnormal condition of the ovum, may bring about a miscarriage. It is doubtful if sudden shock is a cause. The underlying cause is present, and the shock to the patient may be the obvious but not the real cause. The rôle that drugs play in the causation of miscarriage is questionable, for if there were any one drug that would surely bring about a miscarriage it is quite certain that there would be few illegitimate children. Repeated miscarriages may come with any patient, and in order to obviate them it may be necessary for her to stay the greater part of the time in bed. This, however, should be done only on the advice and with the oversight of a physician. To avoid these early miscarriages the patient should see a physician as soon as she suspects that pregnancy has begun, in order to have a careful talk on the hygiene of pregnancy and to receive the

necessary medical care.

The early symptoms of miscarriage are pain resembling, more or less, the pain that many women have with their menstrual period, and a slight amount of bloody show. A woman who supposes that she is pregnant who has a slight show of blood must always regard it as a serious sign until it is proved not to be. Many women think that a slight show of blood is a common thing in pregnancy. As a matter of fact, any sign of blood from the vagina is an abnormal condition and it must be determined by the physician in charge of the case whether a serious interpretation shall be put on it. The principle on which the patient should act is that it is serious until proved to be otherwise, and she must let her physician know that she has had the show of blood as soon as it appears, and not wait for days or even hours.

TOXEMIA OF PREGNANCY

Any woman who is pregnant may develop a toxemia of pregnancy. That is the name given to the poisoning that takes place as the result of pregnancy. The exact cause of this poisoning is unknown at the present time. It is characterized by certain signs and symptoms, chief of which are headache, lassitude, spots before the eyes, sometimes pain in the pit of the stomach, diminished amount of urine which when analyzed contains varying amounts of albumin, and a rising blood-pressure. If this poisoning goes on without treatment, convulsions appear, and the condition is then called eclampsia. A toxemia may develop at any time; eclampsia develops only very rarely when there is efficient medical supervision.

Relatively few cases of eclampsia come out of a clear sky. Practically all are of some days, sometimes of weeks, duration, and the eclampsia appears as the result of the accumulated poisons. It is because a toxemia may appear at any time that physicians ask patients to send in specimens of urine regularly and ask to see the patients regularly. In the past years this insistence throughout the country that patients be seen regularly has brought down the number of eclamptic cases very greatly. This is especially true in the large clinics. Many clinics can show thousands of cases in which perhaps only one or two cases of eclampsia have developed. Unfortunately this is not as true of cases looked after by private physicians. The reason for this condition is two-fold: first, patients do not seek medical care sufficiently early; and second, it is all too frequently the case that medical care consists only in the patient going to the doctor, telling him that she is pregnant, making an approximate date for the delivery, and then not seeing him again until she starts in labor. An analysis of many of the disasters that appear in pregnancy shows that the patient has often not been seen until she comes into labor, or at most perhaps a day or so before delivery takes place. That of course should be an impossible situation. No patient should go through her pregnancy without intelligent medical super-vision, and intelligent supervision can not be given unless the patient will cooperate with the doctor and unless the doctor insists that the patient come to see him, as has been discussed under "Hygiene of Pregnancy," chapter IV.

There is no more terrifying condition in preg-

There is no more terrifying condition in pregnancy than an eclampsia, and it has been well demonstrated that eclampsia can be almost completely

wiped out if the patient and the doctor cooperate. If either one fails to do what progressive physicians know is the proper procedure, disaster may overtake any pregnant woman. I do not write this in order to make the pregnant patient apprehensive, but it is well to let her know that this condition, toxemia of pregnancy, may arise at any time; that, if properly supervised, in the majority of cases no serious outcome will appear. In a very few cases even under careful supervision the toxemia of pregnancy will go on and develop into eclampsia, but those cases are very few and far between. At the present day it is almost fair to say that if an eclampsia develops, some one has failed-either the patient herself has neglected to go to her physician, or the physician has sadly failed in carrying out the fundamental rules of the hygiene of pregnancy.

BLEEDING IN PREGNANCY

In the earlier section we spoke of the bleeding that sometimes occurs in the early part of pregnancy, due to a miscarriage. As pregnancy goes on, if bleeding occurs, the patient must always regard it as a more serious sign. No matter how slight a bleeding appears, she should go to bed and at once notify her physician. He will determine whether the bleeding is serious, but under no circumstances should the patient continue up about the house with her daily routine while she has a slight show of blood from the vagina. She must not believe the story that bleeding in pregnancy is a normal condition that often occurs, for it does not ever occur in a normal case. In the latter three months of pregnancy the bleeding may be a very serious sign, and if it is not carefully and intelligently managed the patient may suffer very serious results.

SEPSIS, PUERPERAL FEVER, CHILDBED FEVER

In April, 1843, Dr. Oliver Wendell Holmes published an article on "The Contagiousness of Puerperal Fever," in which his final paragraph is as "Whatever indulgence may be granted to those who have heretofore been the ignorant causes of so much misery, the time has come when the existence of a private pestilence in the sphere of a single physician should be looked upon not as a misfortune but a crime; and in the knowledge of such occurrences, the duties of the practitioner to his profession should give way to his paramount obligations to society." That statement made eightyodd years ago is as true to-day as it was then. Sepsis must be regarded as a pestilence, and it must be eradicated. Any active practitioner of medicine may have an occasional case of sepsis (puerperal fever, childbed fever), but if he continues having such cases now and again, he should, as Professor Holmes has stated, think of his paramount obligations to society. He is a danger to the community in which he practises. Many thousands of physicians go through their professional careers with only a very rare case of sepsis occurring in their obstetrical work. If these thousands of physicians can do that, then all physicians can do it, but not unless they have developed a conscience, and not unless they do good, clean work on all occasions. Septicemia following childbirth, in the very large majority of cases, is brought to the patient by unclean methods of delivery or of operative work. Until the laity takes the stand that puerperal sepsis must be eradicated, no marked improvement will take place. It is a blot on our country's death-rate that we lose so many mothers each year from puerperal sepsis. I know of no way of overcoming the terrible mortality from this complication except by reiterating again and again that deaths from sepsis are unnecessary in all but a small percentage of cases. In a few cases sepsis will appear no

matter how careful the physician may be.

The point that I want to make is that when a physician every little while has a case of sepsis in his practise, that man is a dangerous practitioner of medicine, and if we are going to improve our mortality records he must be eliminated from doing obstetrical work.

CHAPTER VII

PREPARATIONS FOR DELIVERY

HOME OR HOSPITAL

THE PATIENT must decide, with the help of her physician, whether she will have her baby at home or at a hospital. More and more patients are being delivered in hospitals, and the reason for this is that the hospitals are much better equipped for obstetrical work than they were a few years ago. If a patient is to have her baby in a hospital, she must find out through her physician whether the hospital is well equipped for obstetrical work. There are too many so-called hospitals taking obstetrical work which are only hospitals in name. They are not equipped in any way to look after a delivery satisfactorily. Rather than have a patient go into such hospitals as these, it is far better to have her at home with the necessary supplies there. On the other hand, in a hospital, well equipped according to modern surgical standards, where there is no overcrowding and where good clean work is constantly carried on, the patient undoubtedly is safeguarded in every possible emergency. A physician sending a patient to a hospital vouches for the technique that is employed at that hospital, and it behooves him to know that the technique is satisfactory and up to date.

If, after careful prenatal examination and care, the patient is found to have some abnormality, she is unquestionably better off in a well-equipped maternity hospital. If there is no such hospital in the community where she lives, and an abnormality is discovered, she should go to the nearest good hos-

pital and should not consider being delivered at home. In cases where prenatal care indicates that the pregnancy is advancing normally and there is no reason to anticipate any complications, there is no reason why she should not be looked after at home.

The comparative cost of being cared for at home with a trained nurse or in a well-equipped maternity hospital is about the same. Of course, the cost is much less if the patient is looked after at home with a visiting nurse coming in for the daily nursing and being present at the delivery. When the nursing is done by a semi-trained attendant, again the cost is lower at home than in a hospital. By far the majority of patients are delivered in their own homes, and emergency work alone is sent to the hospital. In the large cities, however, in these days of apartment life, there can be no adequate provision for a delivery at home. Under these circumstances a hospital is much the better place for the average patient. In rural communities where the distances are great and the physicians few, unquestionably patients must plan carefully for their deliveries, and in many instances will have to go to a city or large town to secure adequate care.

If the patient makes up her mind, with the help of her doctor, that it is reasonably safe to be delivered at home, there are certain preparations that must be made. A sunny quiet room should be chosen. Often there is no choice whatever of the room; one is available and that is taken. If possible, it should be in close proximity to a bathroom; but many times a bathroom is a luxury and not a necessity, for many thousands of cases are satisfactorily delivered each year in homes where there is no bathroom. The room should be clean, and not recently used by infectious or contagious diseases. It need not be stripped of its furniture

or hangings, but unnecessary furniture should be removed. A single bed, with the top of the mattress thirty to thirty-five inches from the floor, is ideal. It is not within the means of many families, however, to provide a single bed, and a low double bed must be used which is unsatisfactory from every point of view. Even the low beds can be made satisfactory by placing the four posts on blocks of wood of the height necessary to bring the bed to the desired distance from the floor.

SUPPLIES FOR THE MOTHER

The following is a list of supplies which is entirely adequate for a delivery in the home. Many thousands of women are delivered each year without such supplies, and the work in the out-patient clinics in the poor quarters of the cities is done with no such list. It is not essential that all these things be provided, but if the mother can afford to have them they will help materially in her comfort and care.

2 nail brushes (5c ones)
2 glass drinking-tubes
2 lb. absorbent cotton
1 orange-wood stick

2 enamel basins, 10 in. in diameter

1 large basin, 12 to 18 in. in diameter 2 pails with covers

quart alcohol (medicated)

4 oz. boric-acid crystals 2 half-pound cans of ether

I tube lanoline

8 oz. tincture green soap White vaseline

Delivery pads Bedpan Cheese-cloth Fountain syringe (2 quarts)

Hot-water bottle

6 yards unbleached cotton to make binders Rubber sheeting to cover

the bed Rubber sheeting, one yard

square
2 doz. safety pins, size o
4 doz. safety pins, size 4

4 doz. safety pins, size 4 Old blanket, clean and soft Plenty of old linen and

Newspapers

I pair white stockings

The essential items in this list are: absorbent cotton, basins, bedpan, rubber sheeting, and bed-pads to cover the bed. The delivery pads can be made from eight to ten thicknesses of newspaper with muslin or cheese-cloth tacked over the newspapers. As one is soiled it is replaced by a new one. Three or four are sufficient. The pads that are used after the delivery are made from absorbent cotton covered with cheese-cloth and either done up in packages of three or four or put into a pillow case, and then baked. This, of course, does not give absolutely sterile pads for use after the delivery. In many parts of the country the Visiting Nurse Associations have the pads sterilized at their central offices and sell them to the prospective mothers for a nominal sum. If the patients are unable to obtain these sterilized pads, the nurses will show them how to make the pads and do them up, so that they can be relatively sterile.

If this list is not essential, why do we ask for it? It is perfectly true that many deliveries can be successfully accomplished without any such list, but the articles in this list do add much to the comfort of the patient. There are two things to be considered in every delivery; first, the safety of the patient, and second, her comfort. The safety of the patient depends upon the careful supervision of the patient throughout her pregnancy, as outlined in the "Hygiene of Pregnancy," and upon the delivery being accomplished in an aseptic, clean manner so that the patient does not become infected. It has been shown by many series of statistics that thousands of women die each year, as a result of childbirth, from sepsis, which is the medical term for blood-poisoning. It has further been shown that practically all of these cases die from infection carried from outside to the patient, either by unclean

surroundings, or by unclean, careless vaginal examinations and unclean operating. If we can safeguard these thousands of women by insisting that they have adequate care at the time of delivery, we can do much to lower our maternal death-rate.

To overcome the lack of sterile supplies, there has been developed a system for the putting up of sterile packages containing the necessary pads, bedpads, sheets, and towels. The expense of these outfits is considerable. If it is known that they are sterilized by a reputable concern and put up in a proper manner, they are most satisfactory. Too much reliance must not be put on the absolute sterility of these supplies when they are obtained from department stores. How long they have been in stock, no one knows. If such outfits are to be bought, they should be obtained from well-known and reliable surgical-supply houses and not from department stores.

CHAPTER VIII

LABOR

CAUSE OF LABOR

WHY PATIENTS start up in labor has long been a debated question. No one has yet discovered the fundamental cause. Many reasons have been assigned for it. Exactly whether it is due to the distension of the uterus, to some changes in the placenta, or what may be the cause, no one really knows. We simply know at the present time that, as a rule, labor begins after the pregnancy has existed over the usual time of ten lunar periods, or 280 days. The majority of patients start up labor in relation to their tenth period. Some, as has already been stated in "Duration of Pregnancy," may go overtime.

PREPARATION OF THE PATIENT

As soon as it is determined that the patient is in labor, there are certain things which must be done. First the pubic and the vulval hair should be shaved. It is much safer to shave the pubic hairs than to clip them, for if they are shaved there is no danger of the short clipped hairs being carried into the vagina during labor. If patients realize that this shaving is done for their own comfort and safety they will never object. It should be a routine procedure to shave all patients before the delivery. The patient then takes a sponge bath, or is given one if the nurse is present. Under no circumstances should she take a tub bath. This is especially to be in-

sisted upon if the patient is having her second baby, because of the relaxation of the vagina that is so commonly present. There is no objection, however, to her getting into the tub and kneeling down, but she should not sit in the tub. The hair is then braided in two braids to obviate matting and tangling while the patient is in active labor. The food that should be taken during labor is a debatable point. Many physicians give a relatively small amount of food, because they feel that when a patient is in active labor food digests poorly and many times is vomited, to the great discomfort of the patient. On the other hand, if the patient is having a slow, longdrawn-out labor, she must have a sufficient amount of food to satisfy her. If she is in active labor, however, the probability is that she will need but little food until after the labor is over.

COURSE OF LABOR

Labor is divided into three parts. The first part is occupied in the dilatation of the mouth of the uterus. The second is the expulsive stage, in which the baby is expelled from the mother, and the third is the expulsion of the placenta, or afterbirth. The beginning of labor is most variable. Its onset is shown by the occurrence of intermittent pains at varying times. These pains are caused by the uterine contractions. Uterine contractions may be noted throughout the patient's pregnancy, but they are not painful until the patient starts in labor. It is these painful contractions, the so-called labor pains, that are characteristic of labor. The first pains sometimes are felt in the lower abdomen and sometimes in the lower back. They may first simulate a stomachache or a backache. How any one woman will start in labor is not known, and if she has started in labor once in one way she will not necessarily start in the same way in succeeding labors. Coincident with the pains, if the patient puts her hand on the abdomen she will feel the uterine muscle contract and become very hard while the pain is present. The pains may begin at first only once an hour or once in twenty minutes, or they may start at once, coming either ten or five minutes apart. At the beginning, or shortly after the pains have begun, the patient may notice a slight increase in leucorrhea coming from the vagina, oftentimes tinged with blood, and as labor goes on and becomes definitely established this leucorrheal discharge changes to a thick, mucous, tenacious discharge, more or less tinged with blood. This appearance of blood is the so-called "show" that many patients have, and it is much more apt to be present in a woman having her first baby than in a woman having repeated pregnancies. It is due to the stretching of the mouth of the uterus, which causes the small blood-vessels to break. Some nurses and doctors are in the habit of following the progress of a patient by the amount of show that she has. This is an entirely unreliable sign, for many patients, especially after they have had the first child, will complete the first part of labor without any show whatsoever. The principal characteristic of normal true labor is that the pains recur at decreasing intervals and become steadily harder and more severe. The first stage of labor is much more difficult for many patients to bear than the second stage, for it is in this first part of labor that patients feel they are not accomplishing anything, and lose courage and want help. A first-class nurse is of much assistance at this time, for with the help of the doctor she will carry many patients through a trying first stage.

Gradually, as the pains come with increasing frequency, the mouth of the uterus becomes what is

called "fully dilated." That is, the uterus is ready to expel the baby. It is in this stage that the bag of waters which surrounds the baby is supposed to break. If this bag of waters, the amniotic sac, does not break when the mouth of the uterus is fully opened, the physician breaks it in order to let the expulsion of the baby take place. If the amniotic sac breaks before labor pains begin, the patient will have what is designated as a "dry labor." To the laity a "dry labor" means a long, hard, difficult labor. That is sometimes true, but it often happens that labor will start promptly, and will go through to a perfectly successful conclusion even if the labor is dry. It is hardly fair to say, because the patient ruptures her membranes early before labor begins, that she is sure to have a difficult time, for such is not necessarily the case. Sometimes, however, a dry labor is long and hard, and the risk to the baby is increased because the pressure of the contracting uterus is greater on the baby when the uterus has become emptied of fluid.

As the first stage is completed, which is determined by the doctor, the second or expulsive stage begins. It is then that the patient begins to have a desire to bear down and to hold her breath in order to push the baby out. The patient should not bear down and try to expel the baby until she is told by her doctor that it is time for her to do so. Bearing down before the mouth of the uterus is open tires her out, may cause unnecessary tearing, and will lead more frequently to operative interference than any other one procedure. If the doctor does not arrive, a good rule for the patient to follow is not to bear down until the pains are such that she can not hold back any longer. Gradually the baby is pushed down until the head is seen, then the head is born, followed by the shoulders and the body.

After the delivery of the child the third stage begins. This stage is the delivery of the placenta. Between the birth of the baby and the delivery of the placenta, many doctors look at the birth canal to see whether any tears have taken place. If it is not done then, it is done immediately after the placenta is delivered. Every patient who is torn at all should be sewed up at once. Except for the very simple breaks in the mucous membrane, all tears should be repaired. There is absolutely no reason for criticism of the doctor if a tear occurs, for in many cases it can not be helped. In by far the majority of cases there is some slight tear of the patient at the delivery. When the patient considers the reason for the tear, she surely can not blame the physician for it. The birth canal is stretched from a small passage up to a canal that will admit the passage of the baby's head. The wonder is that more severe tears do not occur. The criticism should come when the physician does not repair the tears. A tear may occur in the practise of any physician, but there are all too few stitches put in after the tears have been produced. The more careful the physician, the more carefully does he investigate the birth canal to see whether a tear has occurred, the more certain is he to put in the necessary stitches to bring the broken tissue into good approximation. I know of one case of a physician who said that he could not afford to put in any stitches in the town where he practised, because none of the other doctors ever sewed up a tear, and if he were known to do so he would not get any work. Such a situation should not be allowed to exist. The man who puts in stitches must be regarded as a careful man, and one who is trying to safeguard the patient's future well-being.

ANESTHETICS IN LABOR

Most patients are given no anesthetic during their labor. Probably the reason for this is the fact of the added cost, and because in the majority of cases there is nobody present to give the anesthetic. Ether is the safest anesthetic for use, but chloroform in labor has been given for years without fatalities, and when carefully administered can be used with quick effect and apparently without danger. In recent years the combination of nitrous oxid and oxygen has been used with great success. This, however, necessitates a special machine for its administration, it is expensive, and it will probably never come into general use. To be given satisfactorily and well it needs an assistant or a well-trained nurse to administer it. The so-called "twilight sleep," which is the use of some derivative of morphia and the drug scopolamin, caused a great furor a few years ago, but is not being used to any great extent at the present time. It must be used only by physicians well qualified to give it and to follow its action carefully. Carelessly given, it may cause serious trouble. Carefully given in certain selected cases, it does work beautifully. It takes about three hours for the drug to work satisfactorily; hence, in rapid labors it is impossible to administer it successfully. At the present time many doctors are administering it in a modified form, not attempting to cause complete forgetfulness, but with the object of easing the labor. Labor should be made in all cases as easy as possible, and never in a normal case is there a contra-indication for the use of an anesthetic.

CHAPTER IX

THE BABY

THE CARE of the baby is ably covered in another book of this series and therefore it is unnecessary to go into the various details that are essential for the baby's well-being. There are, however, a few points that should be taken up here.

The greatest number of deaths among babies occur in the first week of life, and during this first week the majority die in the first twenty-four hours. showing how frail a hold on life a new-born baby has. Many babies are seriously chilled at birth, and to avoid this the room where the baby is born should be warm and without drafts. For a full-term baby a temperature of 75 degrees Fahrenheit is satisfactory; but if the baby comes before the full time, the room in which the delivery takes place should be up to 80 degrees so that there can be no chilling. As soon as the birth has occurred the baby must be covered up at once and the body-heat carefully preserved. Heaters, carefully placed, unless the baby is born in hot summer weather, should be around the baby.

The umbilical cord, which is tied and cut by the physician in charge of the delivery, must be carefully covered with a sterile dressing so that no infection (poisoning) will take place at this point. Bleeding occasionally occurs from this cord after it is tied, and, therefore, the cord must be inspected every few minutes to see that no bleeding is taking

¹ See "The Baby's Health," by R. A. Bolt, M.D., in the National Health Series.

place. The cord gradually dries up, and from the third to the tenth day drops off, leaving a well-healed umbilicus (navel). If the cord becomes moist or does not promptly separate, the physician

does what is necessary to make it right.

The baby's first bath is given usually after the mother is made comfortable. There never is any hurry about this first bath, and unless the room in which it is to be given can be made warm, it is much better that the bath be postponed until the room is sufficiently warm. Here again serious chilling of the baby often takes place and must be guarded against. If the baby has been subjected to a hard operative delivery it is better to delay the bath until the baby's condition is entirely satisfac-

tory.

The physician should invariably put into each eye of a baby soon after birth a drop of a silver-salt solution to prevent the swelling and discharge that babies sometimes have following birth. In many cases this discharge is caused by a gonorrheal infection, but it should never be regarded as such unless the patient is known to have had this disease or a proper examination of the discharge discloses its character. The birth canal in every woman has many bacteria in it, and this simple precaution safe-guards the baby's eyesight. In many States the law requires that every baby shall have this treatment carried out by the physician. In some States when a birth occurs in a hospital this treatment is compulsory. Since this routine has been carried out the number of babies with sore eyes (called ophthalmia neonatorum) has been greatly reduced. safeguard the baby's eyesight still further, the mother or person in attendance must report to the physician at once if the baby shows any redness or swelling or stickiness of the lids at any time. If such a condition occurs, efficient medical treatment must be begun at once or the baby may lose its eyesight. Delay of a few hours may mean total blindness.

Occasionally the breasts of a new-born baby swell and become hard and red. Usually if they are left absolutely alone they soon soften and become normal. In rare cases an abscess forms and must be opened and drained. It must be insisted upon that if the breasts do become red and hard they are not to be rubbed by the mother or the untrained attendant.

The management of nursing and other points in the baby's early life are taken up fully and com-

pletely in another volume.

CHAPTER X

CONVALESCENCE

REST AND VISITORS

REST and quiet are the first two requisites for a woman who has just been delivered of a baby. No matter how short the labor has been or how well she may feel, under no circumstances should she be deprived of rest and quiet. Labor at best is work, and many times hard work. When it is successfully accomplished the patient deserves a good period of undisturbed freedom from the cares and worries of her household. The rest and sleep immediately after the labor is over is most essential and does much to start the patient on a good convalescence. In the morning there is not always time for a nap, but in the afternoon after lunch one must always be taken. At least eight hours sleep is necessary, but this can not always be obtained consecutively on account of the baby's nursing.

Friends and relatives, more curious always to see the baby than to see the mother, may be received when, in the physician's judgment, the patient will gain by a short sprightly visit. The majority of women are not in any way to be regarded as sick patients. Callers of the right and sensible kind are always cheering, but when those of the reverse type wish to see the patient it is always best to become very strict and keep them away. Callers of the latter type are much too apt to stir up and annoy a woman who has just been delivered. We do not consider it at all necessary, however, to keep friends away for any great time. On the other hand, should

the patient be sick, a different problem arises and the physician must settle whether visitors are to be permitted.

DIET

Years ago, and even now by some physicians. women just delivered are kept on liquids and semisolid foods for the first three days. We believe that this is entirely unnecessary, and advise letting the patient have a good nourishing diet of marked variation. They may have practically anything they wish, provided they know that what they eat will not cause indigestion. Naturally they should not choose anything which if they were up and about would commonly upset them. They should not overeat, but they must have a well-balanced diet. Do not begin to eliminate one article of diet after another because the baby has an attack of colic. Wait until the baby is normal again and then again eat the suspected article. If the baby is again distressed it is reasonable to eliminate this one article from the diet. The practise of forcing patients to drink one or more cups of various rich drinks between meals in order to increase the milk is of doubtful value, for before many days the majority of patients will have an upset stomach and the desired result is not secured. On the other hand, if patients feel the need of some light food or drink between meals, there is every reason for their having it.

BOWELS

Most patients are more comfortable if they have a daily movement of the bowels. Some physicians order a mild laxative to be taken each night, while others order an enema or a suppository. Diet alone in the first days of the convalescence will not usually produce a movement.

URINE

Because of the stretching of the birth canal and the pressure on the urethra, women just delivered frequently find it difficult to pass their urine. This is with some patients complicated by the fact that they never before have had to make use of the bedpan. A further reason is that the bladder fills up very readily because of the relaxed abdominal walls, and patients do not realize what is taking place. For this reason it is essential to know that the bladder is always emptied at each voiding.

INVOLUTION OF THE UTERUS

After the birth of the baby and afterbirth, the uterus is felt as a hard round mass almost up to the umbilicus (navel). In order to come down to its normal size after the birth, certain changes take place and these changes are expressed by what physicians call the involution of the uterus. After the birth the uterus weighs about two pounds, and as a result of this involution, carried out properly and completely, it comes to weigh roughly about two ounces. It is a marvelous phenomenon, and to accomplish it time and rest are necessary. From day to day the physician or nurse carefully notes the progress of the uterus decreasing in size, until by the end of a week it is scarcely felt in the abdomen, having grown so small that it goes down into the pelvis. The physical sign of this process is shown by the discharge which is always present after a delivery. This discharge—called the lochia—is at first bright red and profuse, but gradually lessens in amount and becomes less colored. Gradually it becomes whitish, and in the course of two to three weeks the patient finds that she has no more vaginal discharge than was present before she was pregnant.

NURSING

Nursing is begun after the patient has her first good rest, usually within the first twelve hours. The first attempts of the baby to nurse may be futile, but most babies take hold of the nipples without any delay. Babies go to the breast perhaps twice in the first twenty-four hours, four times the second. Whether they are put on a regular three-hour schedule depends upon how much milk is present on the third day. Normal new-born babies should not nurse oftener than every three hours from six a. m. to ten p. m. Many babies do better on fourhour intervals. Some babies do remarkably well without the early two a. m. feeding, and others apparently need this extra feeding. If the two a. m. feeding is started, it must be stopped as soon as it is possible to do so, for unbroken sleep means much to the well-being of the mother. Practically all women can nurse, at least for a few weeks, if they wish. The woman who refuses to try to nurse her baby is not worthy to have one. Fortunately at the present day this situation rarely occurs.

I shall not go into the technique of nursing. Suffice it to say that the nipples must be kept clean and protected. Individual doctors vary much in their methods. If, however, the nipples become sore, cracked, or bleeding, the physician must be notified at once, not after a few hours. Much can be done the moment a crack appears, but after it has become

marked it is increasingly difficult to heal.

If, while the patient is nursing, she feels any tender spot in the breast or a lump develops, the physician must be consulted at once, for if tender spots and lumps are not properly and immediately treated,

breast abscesses may develop.

EXERCISES

In the first week after the baby is born many physicians ask their patients to begin simple foot-and-leg exercises. Gradually they are increased in duration and more strenuous ones are added. If exercises are done carefully and intelligently, the majority of patients get up out of bed and experience no sensations of pins and needles in the feet and legs. The exercises strengthen the abdominal muscles, and the patient recovers her normal figure much more quickly than when she does not make use of them.

The abdominal binder is put on the patient immediately after delivery in probably the majority of cases. It gives the patient a sense of support and makes her much more comfortable. The binder may, however, be taken off as soon as her exercises are begun. Patients desire the abdominal binder, for by it they think that they will regain their figure rapidly. This, however, is not the case, and many physicians forbid the binder entirely, fearing it will cause displacement of the uterus. The putting on of corsets after delivery is usually a question of great moment. Women desire them for the same reason they wish the binder, and because they are accustomed to them. Exercises will do much more good than the corsets, but few women will give up the time necessary to have exercises help their muscles. They prefer to take the short-cut for support and use the corset. The physician will tell the patient when the corset may be put on. It must be remembered that the support must be from below upwards.

GETTING UP

A patient should stay in bed at least ten days following childbirth. The birth canal does not ap-

proach normal in less time than this, and for the welfare of the patient fourteen days should be insisted upon. For obvious economic reasons the majority of women are up and about doing their work in two weeks. The result is that in later years they have to undergo serious reparative work or lead lives of semi-invalidism. Rest in bed until the uterus becomes small and of normal size is a woman's right following childbirth, but one that the majority scarcely ever exercise.

RETURN OF MENSTRUATION

The majority of women who nurse their children do not menstruate while nursing. There are, however, many exceptions. In fact, the exceptions are so common that it is my custom to tell patients that they may menstruate at any time. The first menstruation is apt to be profuse, and the patient should rest as much as possible during it. Women must remember that whether menstruation is established or not, pregnancy may follow if intercourse takes place. The old theory that as long as a woman is nursing her baby and is not menstruating she can not again become pregnant has been many times disproved.

FINAL EXAMINATION

Every patient should, six weeks after the birth of her baby, have a final examination in order to be certain that the pelvic organs are in normal condition. If the uterus is found to be displaced, treatment can be carried out at this time which, if neglected, may cause much unnecessary discomfort.

CHAPTER XI

CONCLUSION

THE FOREGOING outline of the care of the pregnant woman is in its essentials one that has worked most satisfactorily for a number of years in my own practise. The fundamental point to be insisted upon is cooperation between the physician and the patient. The former, to do good obstetric work, must have within him a true sense of responsibility to the community in which he practises and a well-developed conscience. The majority of physicians to-day are well trained and know how to manage obstetric cases successfully. The latter must be taught that without careful supervision disasters will inevitably arise. Physicians are many times blamed for these untoward results when in reality the blame lies with the patient. She either has gone through her pregnancy without supervision or she has failed to report her symptoms as requested. Pregnancy is a normal physiological function, but there is no condition in medicine which may cause such disaster so quickly as a badly managed pregnancy. Disasters, on the whole, are really of rare occurrence, and if the routine as here outlined were carried out in all cases they would be still further reduced. Lack of intelligent oversight by the physician is the cause of most of the bad results. If the physician is at fault, he is to be condemned; if the patient is to blame, then the other women in her community must be taught wherein she erred so that they may do differently. Successful results follow cooperation between physician and patient.



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